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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/613,905
Filing Date: July 04, 2003
Appellant(s): HARVILLE ET AL.

John P. Wagner, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 28, 2008 appealing from the Office action mailed October 17, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,407,680 Lai et al. 06-2002

Wei Tsang Ooi et al. "Distributing Media Transformation Over Multiple Media Gateways."

Proceedings 9th ACM In't Conference, October 2001. Pages 159-168.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai (US Patent No. 6,407,680) in view of Wei Tsang Ooi et al. ("Distributing Media Transformation Over Multiple Media Gateways," hereinafter "Ooi").

Regarding claim 1, Lai shows a method for managing a streaming media service, said method comprising:

- receiving a request for a streaming media service from a client (see step 502 in Fig. 5A and col. 14, lines 42-44), said streaming media service comprising a plurality of media services components (comprising transcoding, transmitting, and streaming: see Fig. 2);
- determining which media service component of said plurality of media services components to assign to a service node of a plurality of service nodes (comprising deciding which node should be assigned a task, the nodes comprising machines in machine farm 216: see col. 15, lines 43-50) of a network (for example, a packet-switched computer network: see Fig. 1 and col. 8, lines 11-16); and
- informing each service node assigned to perform a media service component of said plurality of media services components (comprising assigning a task to a machine: see step 512 and col. 15, lines 38-43), enabling said streaming media service to be performed on a streaming media (see steps 516-524 in Fig. 5B and col. 16, lines 46-49).

Lai does not explicitly teach reassigning the determined media service component to a different service node selected from the plurality of service nodes while continuing to provide the streaming media to the client.

Ooi shows reassigning a determined media service component (operation) to a different service node (gateway) selected from a plurality of service nodes while continuing to provide streaming media to a client (see full paragraphs 1-5 on page 163).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Lai with the service component handoff taught by Ooi in order to adapt to network environment changes (see first paragraph under section 3.1 on page 162).

Regarding claim 13, Lai shows a system for managing a streaming media service, said system comprising:

- a plurality of service nodes (comprising the machines in machine farm 216: see col. 15, lines 43-50) for performing a streaming media service on streaming media, said streaming media service comprising a plurality of media services components (comprising transcoding, transmitting, and streaming: see Fig. 2);
- a client for requesting said streaming media service (client 102);
- a manager (resource manager 208) coupled to said plurality of service nodes of a network and said client and for determining which service node to assign to perform each media service component of said plurality of media services components (comprising assigning a task to a machine: see step 512 and col. 15, lines 38-43); and

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- a service builder (task manager 206) coupled to said manager and for communicating a list of said plurality of media services components to said manager (the list comprising a set of tasks: see step 510 and col. 15, lines 27-38).

Lai does not explicitly teach reassigning the determined media service component to a different service node selected from the plurality of service nodes while continuing to provide the streaming media to the client.

Ooi shows reassigning a determined media service component to a different service node selected from a plurality of service nodes while continuing to provide streaming media to a client (see full paragraphs 1-5 on page 163).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Lai with the service component handoff taught by Ooi in order to adapt to network environment changes (see first paragraph under section 3.1 on page 162).

Regarding claims 2 and 14, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said streaming media is selected from video, audio, multimedia, and text (see Table 1 on columns 18-20).

Regarding claims 3 and 15, Lai in view of Ooi shows the limitations of claim 1 as applied above, but does not show wherein said determining is based on location of said client.

Ooi shows assigning a media service component to a service node based on the location of a client (comprising assigning a computation that increases bit-rate to a gateway near the receiver: see last paragraph of Introduction).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Lai in view of Ooi with the determination process of Ooi in order to minimize bandwidth consumption.

Regarding claims 4 and 16, Lai in view of Ooi shows the limitations of claim 1 as applied above, but does not show wherein said determining is based on bandwidth of said network.

Ooi shows assigning a media service component to a service node based on bandwidth of a network (comprising using an entity to transform media streams into lower bit-rates for slow links: see first paragraph of Introduction).

It would have been obvious to one of ordinary skill in the art to modify the invention of Lai in view of Ooi with the determination process of Ooi in order to provide a better user experience to users of slow communication links.

Regarding claims 5 and 17, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on load on said network (the load comprising “network congestion”: see col. 15, lines 50-53).

Regarding claims 6 and 18, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on load on each service node of said plurality of service nodes (the load comprising CPU utilization: see col. 15, lines 43-50).

Regarding claims 7 and 19, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on an existing streaming media service on said network (comprising using software residing on content provider client 104 instead of a transmitting server in machine farm 216: see col. 10, lines 44-49).

Regarding claims 8 and 20, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said determining is based on a previously assigned media service component (comprising not assigning a transcoding server when one had previously been assigned for a particular set of media content: see col. 11, line 65 to col. 12, line 6).

Regarding claims 9 and 21, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein said receiving said request is through a service portal (viewer web-server interface 202: see Fig. 2 and col. 14, lines 42-44).

Regarding claims 10 and 22, Lai in view of Ooi shows the limitations of claims 1 and 13 as applied above, and further shows wherein each of said plurality of service nodes generates an input communication socket and an output communication socket to enable communication between assigned service nodes (inherently disclosed as being a necessary part of the process by which the servers receive and send data from other servers, as it is necessary to create input and output sockets to receive and send data over a network). See col. 10, lines 19-33 and col. 16, line 46 to col. 17, line 60.

Note that in addition to enabling communication between assigned service nodes, the input and output communication sockets enable retrieving media content and sending it to a viewer client. See col. 15, lines 30-35.

Regarding claims 11 and 23, Lai in view of Ooi shows the limitations of claims 10 and 22 as applied above, but does not explicitly show wherein said input communication socket enables decompressing said streaming media.

Ooi shows a group of assigned service nodes (comprising media gateways: see Fig. 1A), each of which has generated a module for receiving and decompressing streaming media (note that as described in 1.4, each gateway must have software to decompress a media stream).

It would have been obvious to one of ordinary skill in the art to modify the invention of Lai in view of Ooi with the media gateways and modules of Ooi in order to distribute the load of transcoding media among multiple devices. See paragraph 3 of section 1.1.

Regarding claims 12 and 24, Lai in view of Ooi shows the limitations of claims 10 and 22 as applied above, but does not explicitly show wherein said input communication socket enables decompressing said streaming media.

Ooi shows a group of assigned service nodes (comprising media gateways: see Fig. 1A), each of which has generated a module for compressing and sending streaming media (note that as described in 1.4, each gateway must have software to compress a media stream).

It would have been obvious to one of ordinary skill in the art to modify the invention of Lai in view of Ooi with the media gateways and modules of Ooi in order to distribute the load of transcoding media among multiple devices. See paragraph 3 of section 1.1.

(10) Response to Argument

Appellant argues claims 1-24 together, and appears to have selected claim 1 as representative of the group.

The Examiner will first address the alleged “inconsistencies” in the Final Action. Appellant indicates that the title and page numbers of the Ooi reference listed on the Notice of References Cited (“An Adaptive Protocol for Locating Programmable Media Gateways”) differ from those of the Ooi reference relied upon in the Action (“Distributing Media Transformation Over Multiple Media Gateways”). Appellant further indicates that they “have not been successful in locating” the Ooi reference relied upon in the Action, and so instead have prepared their arguments using the Ooi reference listed on the Notice of References cited.

The Examiner submits that the Ooi reference relied upon in the Action was provided to the Office *by the Appellant* on January 25, 2005 along with an Information Disclosure Statement. The additional Ooi reference listed on the Notice of References Cited was cited as being merely pertinent to Appellant's disclosure, as explained on pages 9-10 of the Final Action.

Appellant argues that Ooi does not teach “reassigning the determined media service component to a different service node selected from the plurality of services [*sic*] nodes while

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continuing to provide the streaming media to the client,” and therefore the combination of Lai and Ooi does not teach or suggest the features of claims 1-24. The Examiner disagrees.

Ooi (that is, “Distributing Media Transformation Over Multiple Media Gateways” by Wei Tsang Ooi and Robbert van Renesse) teaches a system wherein a system of gateways (service nodes) on a network may be arranged to successively operate on a media stream. Each gateway performs an operation (media service component) on a stream before passing the stream to the next gateway. See section 1.1. Furthermore, the system can migrate an operation between gateways whenever it would be advantageous (see first paragraph of section 3.1 on page 162). Ooi describes the process by which this occurs in the first five full paragraphs on page 163.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Lai with the service component handoff taught by Ooi in order to adapt to network environment changes (see first paragraph under section 3.1 on page 162).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/C. B./
Christopher Biagini
Examiner, Art Unit 2142

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2142

Conferees:

/Andrew Caldwell/
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